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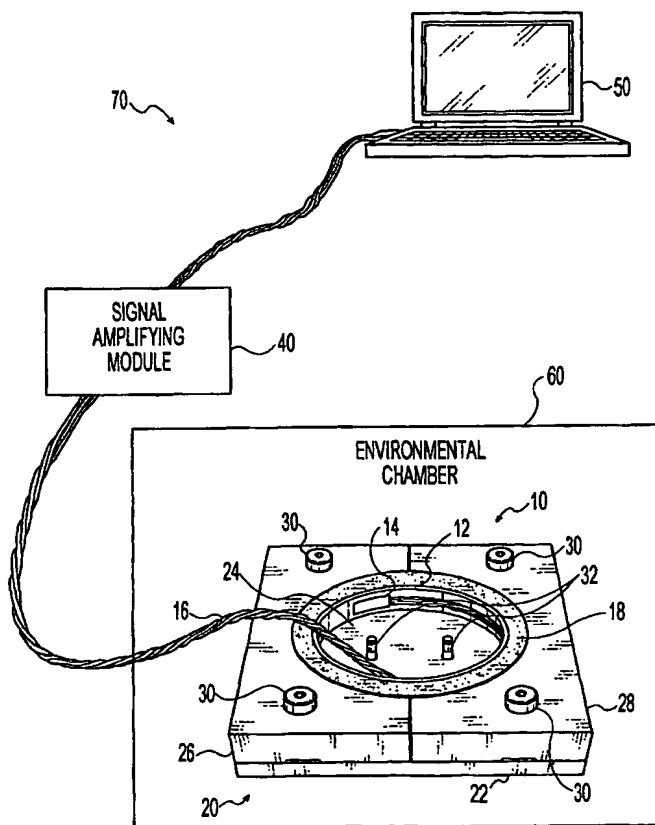
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(54) Title: **DEVICE AND METHOD FOR TESTING PAVING MATERIALS**



(57) Abstract: A device and method for directly measuring the critical temperatures for thermal cracking of asphalt binders (10). The exemplary comprises a metal ring (12), a strain gauge (14) attached to the inner surface of the ring, an environmental chamber (60), one or more signal amplifiers (40), and a data acquisition system (50) such as a laptop computer running suitable data analysis software. A mold (20) that is also a component of the present invention is used to create a circular asphalt binder test specimen (18). When properly cast the specimen (18) encircles the metal ring (12). The specimen (18) and ring (12) are placed within the environmental chamber (60) for analysis. Development of thermal stress (induced by temperature reduction within the environmental chamber) within the asphalt binder test specimen (18) is monitored by the strain gauge (14) and the cracking temperature is directly determinable from the strain reading.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01D 1/00, G01N 11/00, G01N 3/00

US CL : 73/803, 787, 788

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 73/803, 787, 788

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
East text search.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
US-PG Pub, EPO, JPO, Derwent, IBM_TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,425,808 A (RAND) 17 January 1984 (17.01.1984), Fig. 1, Abstract.	1 ----- 2-16
X --- Y	US 4,498,231 A (RAND) 12 February 1985 (12.02.1985), Fig. 1, Abstract.	1 ----- 2-16
Y	JP 05087716 A (TAKENAKA KOMUTEN CO. LTD.) 06 April 1993 (6.04.1993), Abstract, Fig 1-6.	2-16
Y	JP 06174614 A (NIFCO INC.) 24 June 1994 (24.06.1994), Abstract, Fig 1-7.	2-16

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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